

WHAT IS CLAIMED IS:

(1) A communication system comprising:
a first radio network operating using
a first communication protocol;
a second radio network operating using
a second communication protocol;

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a mobile network device having a
single radio unit capable of participating in
both the first and second radio networks;

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the mobile network device
participating as a slave device to the first
radio network pursuant to the first
communication protocol while participating as a
master device to the second radio network
pursuant to the second communication protocol;

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and
the mobile network device resolving
conflicts between the first and second
communication protocols.

(2) A communication system comprising:

a main radio network;

a radio subnetwork;

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a mobile network device having a first
radio transceiver for communicating with the
main radio network and a second radio
transceiver for communicating with the radio
subnetwork;

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the mobile network device
participating as a slave device to the main
radio network while participating as a master
device to the radio subnetwork.

(3) A communication system comprising:

a first radio network operating using

a first communication protocol;

a second radio network operating using

a second communication protocol;
a mobile network device having a single radio unit capable of participating in both the first and second radio networks;
the mobile network device participating as a slave device to the first radio network pursuant to the first communication protocol while participating as a master device to the second radio network pursuant to the second communication protocol;
and

the mobile network device entering a state of low power consumption when not communicating with either the first or the second radio network.

(4) A communication system comprising:
 a first radio network comprising a
 first plurality of network devices;
 a second radio network comprising a
 second plurality of network devices;
 a mobile network device configured to
 participate as a member of both the first and
 second pluralities of network devices;
 when within range of one of the second
 plurality of network devices, the mobile network
 device participates as a master device in the
 second radio network; and
 when within range of one of the first
 plurality of network devices, the mobile network
 device participates as a slave device in the
 first radio network.
 the second plurality of network
 devices entering a state of low power
 consumption when communication with the mobile
 network device is not available.

(5) A communication system comprising:

a first radio network comprising a
first plurality of network devices;
a second radio network comprising a
second plurality of network devices;
5 a mobile network device configured to
participate as a member of both the first and
second pluralities of network devices;
when within range of one of the second
plurality of network devices, the mobile network
device participates as a master device in the
10 second radio network; and
when within range of one of the first
plurality of network devices, the mobile network
device participates as a slave device in the
15 first radio network.

(6) An RF local area network comprising:
a first network device, the first
network device transmitting using battery power;
a second network device;
means within the second network device
5 for identifying a range value indicative of the
distance between the first and second network
devices;
the second network device responsive
to the identifying means by transmitting the
range value to the first network device; and
10 the first network device, upon receipt
of the range value, identifying an appropriate
data rate for subsequent transmission to the
second network device.
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(7) An RF local area network comprising:
a first network device, the first
network device transmitting using battery power;
a second network device;
means within the second network device
5 for identifying a range value indicative of the

distance between the first and second network devices;

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the second network device responsive to the identifying means by indicating to the first network device an appropriate rate for subsequent data transmission to the second network device.

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(8) An RF local area network comprising:
a first network device;
a battery power supply disposed for
powering the first network device, the battery
power supply having battery parameter
information;

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a second network device;
means within the second network device
for identifying a range value indicative of the
distance between the first and second network
devices;

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the second network device responsive
to the identifying means by sending the range
value to the first network device;

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means within the first network device
for identifying the battery parameter
information; and

the first network device, based on the
received range value and battery parameter
information, identifying an appropriate data
rate and power level for subsequent transmission
to the second network device.

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(9) An RF local area network comprising:
a first network device;
a battery power supply disposed for
powering the first network device, the battery
power supply having battery parameter
information;
a second network device;

means within the second network device for identifying a range value indicative of the distance between the first and second network devices;

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the first network device transmitting battery parameter information to the second network device; and

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the second network device, based on the range value and received battery parameter information, indicating to the first network device an appropriate rate and power level for subsequent data transmission.